REMARKS

The Office Action of May 19, 2008 was received and carefully reviewed.

By this amendment claims 1, 7, 13 and 17 have been amended to clarify the invention, and not for reasons of patentability. By this amendment, no claims have been canceled, and no claims have been added. Consequently, claims 1-3, 7-9, 13, 14, 17 and 18 remain pending.

Support for the amendment to claims 1, 7, 13 and 17 can be found in the specification on page 3, lines 16-18.

Reconsideration and withdrawal of the currently pending rejections are requested for the reasons advanced in detail below.

Rejections under 35 U.S.C. §103

Claims 1-3, 7-9, 13-14 and 17-18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sundahl et al. (U.S. Pat. Pub. 2004/0212573 A1) (*Sundahl*, hereinafter) in view of Ishizuka (U.S. Patent No. 6,479,940 B1) (*Ishizuka*, hereinafter). Applicants traverse this rejection as follows.

The present independent claims 1, 7, 13 and 17, and the claims dependent therefrom, are patently distinguishable over both *Sundahl* and *Ishizuka*, since *Sundahl* and *Ishizuka*, either taken alone or in combination, fail to disclose, teach or suggest all of the features recited in pending independent claims 1, 7, 13 and 17. For example, independent claim 1 (emphasis added) recites:

> A display device comprising:
> a display panel which is equipped with pixels including a light-emitting element;
> a temperature detection unit which detects temperature;
> an A/D conversion circuit which converts the temperature into digital data;
> a storage unit in which a temperature characteristic and an aging characteristic of the light-emitting element are stored, **wherein the temperature characteristic comprises an acceleration factor corresponding to each detected temperature**;
> an arithmetic operation unit which calculates a lighting period of each pixel using the digital data, the temperature characteristic, and a digital video signal;
> a count unit which counts a cumulated lighting period of each pixel

using an output of the arithmetic operation unit; and

a correction unit which corrects the digital video signal to be inputted to each pixel using the aging characteristic and the cumulated lighting period, and supplies the corrected digital video signal to the display panel.

Independent claim 7 (emphasis added) recites:

A drive method for a display device having a display panel equipped with pixels including a light-emitting element, a temperature detection unit, a storage unit in which a temperature characteristic and an aging characteristic of the light-emitting element are stored, an arithmetic operation unit, a count unit and a correction unit, comprising the steps of:

detecting temperature by the temperature detection unit;

converting the temperature into digital data by A/D conversion circuit;

calculating a lighting period of each pixel using the digital data, the temperature characteristic, and a digital video signal by the arithmetic operation unit, **wherein the temperature characteristic comprises an acceleration factor corresponding to each detected temperature**;

counting a cumulated lighting period of each pixel using an output of the arithmetic operation unit by the count unit;

correcting the digital video signal to be inputted to each pixel using the aging characteristic and the cumulated lighting period by the correction unit; and

displaying an image using the corrected digital video signal by the display panel.

Independent claim 13 (emphasis added) recites:

A display device comprising:

a display panel which is equipped with pixels including a light-emitting element;

a temperature detection unit which detects temperature;

an A/D conversion circuit which converts the temperature into digital data;

a storage unit in which a temperature characteristic and an aging characteristic of the light-emitting element are stored, **wherein the temperature characteristic comprises an acceleration factor corresponding to each detected temperature**;

an arithmetic operation unit which calculates the acceleration factor using the digital data and the temperature characteristic, calculates a lighting period of each pixel using a digital video signal and calculates a corrected lighting period of each pixel using multiplication of the lighting period and the acceleration factor;

a count unit which counts a cumulated lighting period of each pixel using an output of the arithmetic operation unit; and

a correction unit which corrects a digital video signal to be inputted to each pixel using the aging characteristic and the cumulated lighting period, and supplies the corrected digital video signal to the display panel.

Independent claim 17 (emphasis added) recites:

> A drive method for a display device having a display panel equipped with pixels including a light-emitting element, a temperature detection unit, a storage unit in which a temperature characteristic and an aging characteristic of the light-emitting element are stored, a count unit and a correction unit, comprising the steps of:
>
> detecting temperature by the temperature detection unit;
>
> converting the temperature into digital data by A/D conversion circuit;
>
> **calculating an acceleration factor using the digital data and the temperature characteristic, a lighting period of each pixel using a digital video signal and a corrected lighting period of each pixel using multiplication of the lighting period and the acceleration factor by an arithmetic operation unit**;
>
> counting a cumulated lighting period of each pixel using an output of the arithmetic operation unit by the count unit;
>
> correcting a digital video signal to be inputted to each pixel using the aging characteristic and the cumulated lighting period by the correction unit; and
>
> displaying an image using the corrected digital video signal by the display panel.

Thus, independent claims 1, 7 and 13 are directed to, *inter alia*, the feature of a storage unit in which a temperature characteristic and an aging characteristic of the light-emitting element are stored, wherein the temperature characteristic comprises data of an acceleration factor corresponding to each temperature. Independent claim 17 is directed to, *inter alia*, calculating an acceleration factor using the digital data and the temperature characteristic, a lighting period of each pixel using a digital video signal and a corrected lighting period of each pixel using multiplication of the lighting period and the acceleration factor by an arithmetic operation unit

Applicants respectfully submit that present independent claims 1, 7, 13 and 17 are patentably distinguishable over *Sundahl* and *Ishizuka*, either taken alone or in combination. Specifically, neither *Sundahl* nor *Ishizuka*, either taken alone or in combination, disclose, teach or suggest discharging a storage unit in which a temperature characteristic and an aging characteristic of the light-emitting element are stored, wherein the temperature characteristic comprises data of an acceleration factor corresponding to each temperature, as recited in independent claims 1, 7 and 13. Additionally, neither *Sundahl* nor *Ishizuka*, either taken alone or in combination, disclose, teach or suggest calculating an acceleration factor using the digital data

and the temperature characteristic, a lighting period of each pixel using a digital video signal and a corrected lighting period of each pixel using multiplication of the lighting period and the acceleration factor by an arithmetic operation unit, as recited in independent claim 17.

Paragraph **[0022]** of *Sundahl*, which the Examiner cites as teaching the arithmetic operation unit that calculates a lighting period of each pixel of the present invention (see page 2 of the final Office Action dated May 29, 2008), actually recites:

> **[0022]** At least one desired result of this technique may be the production of a substantially consistent amount of luminance from all OLED pixels. Based upon the desired amount of luminance, a measured characteristic, such as, for example, the reverse bias resistance of the OLED, may be used to effectively estimate approximately how much current or voltage to apply to the device to produce such a result. This approach makes use of a previously defined relationship between the value of the indicator, such as, for example, reverse bias resistance, and the current (or voltage) utilized to maintain the desired level of luminance.

Thus, as seen above, *Sundahl* is completely silent with regard to an arithmetic operation unit as disclosed by the present invention, and merely "makes use of a previously defined relationship between the value of the indicator, such as, for example, reverse bias resistance, and the current (or voltage) utilized to maintain the desired level of luminance."

Applicants respectfully submit that measuring current or voltage is clearly different from calculating the lighting period of each pixel. Thus, *Sundahl* fails to disclose the arithmetic operation unit of the present invention.

The Examiner correctly admits that *Sundahl* fails to "teach a temperature detection unit which detects an ambient temperature, a storage unit in which a temperature characteristic of the light-emitting element is stored, and an arithmetic operation unit which calculates a lighting period of each pixel using an output of the temperature detection unit, the temperature characteristic, and a video signal", and is reliant upon *Ishizuka* for disclosing these features.

Column 6, lines 58-62 of *Ishizuka*, which the Examiner cites as allegedly teaching the storage unit of the present invention, actually recites:

sion characteristics of the EL device **15** mentioned above. In other words, for example, when the environmental temperature of the light-emitting panel is lower than a predetermined
60 temperature, the temperature dependency is compensated so as to raise the voltage supplied to the light-emitting panel by a level corresponding to the decrease in temperature. On the

Additionally, the Examiner asserts that the predetermined temperature of the above cited passage of *Ishizuka* is equivalent to the temperature characteristic of the present invention. However, Applicants respectfully submit that the temperature characteristic, as claimed in the present invention, is the acceleration factor which corresponds to each temperature, and is different from the temperature itself. Thus, Applicants respectfully submit that the predetermined temperature of *Ishizuka* cannot be equated with the temperature characteristic of independent claims 1, 7, 13 and 17, as alleged by the Examiner.

Furthermore, Applicants respectfully submit that since *Ishizuka* does not teach the temperature characteristic of the present invention, it follows that *Ishizuka* cannot teach the storage unit of the present invention.

Therefore, Applicants respectfully submit that independent claims 1, 7, 13 and 17 are neither anticipated by, nor rendered obvious over the disclosures of *Sundahl* and *Ishizuka*, either taken alone or in combination. Thus, Applicants respectfully request the withdrawal of this rejection, and the allowance of the claims.

Claims 2, 3, 8, 9, 14 and 18 are allowable at least virtue of their dependency from one of the independent claims, but are also distinguishable over the prior art.

Claims 3, 9, 14 and 18 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Sundahl* in view of *Ishizuka*, and in further view of Miyashita et al. (JP Patent No. 36126192A) (*Miyashita*, hereinafter). Applicants traverse this rejection as follows.

Applicants respectfully submit that *Miyashita* fails to make up for the deficiencies of *Sundahl* and *Ishizuka*. Therefore, claims 3, 9, 14 and 18 are allowable at least by virtue of their

respective dependencies, but are also distinguishable over the prior art. Thus, Applicants respectfully request the withdrawal of this rejection.

In view of the foregoing, it is submitted that the present application is in condition for allowance and a notice to that effect is respectfully requested. If, however, the Examiner deems that any issue remains after considering this response, the Examiner is invited to contact the undersigned attorney/agent to expedite the prosecution and engage in a joint effort to work out a mutually satisfactory solution.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 19-2380. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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/Anthony J. Canning, Reg.# 62,107/
Anthony J. Canning
Registration No. 62,107

NIXON PEABODY LLP
CUSTOMER NO.: 22204
401 9th Street, N.W., Suite 900
Washington, DC 20004
Tel: 202-585-8000
Fax: 202-585-8080